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SEQUENCE LISTING

<110> Roberds, Steven L.  
Benjamin, Christopher  
Karnovsky, Alla M.  
Ruble, Cara L.

<120> Human Ion Channels

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<151> 2000-05-10

<150> 60/207,092  
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<150> 60/206,526  
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<150> 60/216,893  
<151> 2000-07-17

<150> 60/237,873  
<151> 2000-10-04

<150> 60/223,245  
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<170> PatentIn version 3.0

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&lt;210&gt; 24

&lt;211&gt; 479

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;210&gt; 25

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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## 00133.US1.ST25.txt

gttttagaac accctaactt cttcctgttc ttctccattt atatcatcg	tggaaatggag	840
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<210> 39  
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<400> 39		
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<210> 40  
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<212> PRT  
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<400> 40

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				20				25				30			

Gly	Ile	Gly	Asp	Gln	Leu	Gly	Thr	Ile	Phe	Gly	Lys	Ser	Ile	Ala	Arg
				35				40				45			

Val	Glu	Lys	Val	Phe	Arg	Val	Ser	Thr	Val	Ser	Tyr	Leu	Asn	Ser	Asn
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His	Cys	Asp	Pro	Ile	Gly	Phe	Ser	Leu	Thr	Gly					
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<210> 41  
<211> 35  
<212> PRT  
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<400> 41

Ile Gly Tyr Gly His Ala Ala Pro Gly Thr Asp Ser Gly Lys Asp Phe  
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Cys Met Phe Gly Gly Val Gly Ile Pro Leu Thr Leu Val Thr Phe Gln  
20 25 30

Ser Leu Gly  
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<210> 42  
<211> 173  
<212> PRT  
<213> Homo sapiens

<400> 42

Gly Lys Ile Phe Leu Ile Phe Tyr Gly Leu Val Gly Cys Ser Ser Thr  
1 5 10 15

Ile Leu Phe Phe Asn Leu Phe Leu Glu Arg Leu Ile Thr Ile Ile Ala  
20 25 30

Tyr Ile Met Lys Ser Cys His Gln Arg Gln Leu Arg Arg Arg Gly Ala  
35 40 45

Leu Pro Gln Glu Ser Leu Lys Asp Ala Gly Gln Cys Glu Val Asp Ser  
50 55 60

Leu Ala Gly Trp Lys Pro Ser Val Tyr Tyr Val Met Leu Ile Leu Cys  
65 70 75 80

Thr Ala Ser Ile Leu Ile Ser Cys Cys Ala Ser Ala Met Tyr Thr Pro  
85 90 95

Ile Glu Gly Trp Ser Tyr Phe Asp Ser Leu Tyr Phe Cys Phe Val Ala  
100 105 110

Phe Ser Thr Ile Gly Phe Gly Asp Leu Val Ser Ser Gln Asn Ala His  
115 120 125

Tyr Glu Ser Gln Gly Leu Tyr Arg Phe Ala Asn Phe Val Phe Ile Leu  
130 135 140

Met Gly Val Cys Cys Ile Tyr Ser Leu Phe Asn Val Ile Ser Ile Leu  
145 150 155 160

Ile Lys Gln Ser Leu Asn Trp Ile Leu Arg Lys Met Asp  
165 170

<210> 43  
<211> 37  
<212> PRT  
<213> Homo sapiens

<400> 43

Pro Pro Met Val Phe Ser His Val Glu Gly Trp Ser Phe Ser Glu Gly

## 00133.US1.ST25.txt

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Val Val Gly Glu Asn			
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<210> 44			
<211> 55			
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<213> Homo sapiens			
<400> 44			
Gly Tyr Gly Tyr Ile Tyr Pro Val Thr Arg Leu Gly Lys Tyr Leu Cys			
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Met Leu Tyr Ala Leu Phe Gly Ile Pro Leu Met Phe Leu Val Leu Thr			
20	25	30	
Asp Thr Gly Asp Ile Leu Ala Thr Ile Leu Ser Thr Ser Tyr Asn Arg			
35	40	45	
Phe Arg Lys Phe Pro Phe Phe			
50	55		
<210> 45			
<211> 141			
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<222> (87)..(97)			
<223> Xaa is any amino acid			
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20	25	30	
Leu Phe Leu Glu Arg Ile Ile Ser Leu Leu Ala Phe Ile Met Arg Ala			
35	40	45	
Cys Arg Glu Arg Gln Leu Arg Arg Ser Gly Leu Leu Pro Ala Thr Phe			
50	55	60	
Arg Arg Gly Ser Ala Leu Ser Glu Ala Asp Ser Leu Ala Gly Trp Lys			
65	70	75	80
Pro Ser Val Tyr His Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa			
85	90	95	
Xaa Ser Cys Cys Ala Ser Ala Met Tyr Thr Ser Val Glu Gly Trp Asp			
100	105	110	
Tyr Val Asp Ser Leu Tyr Phe Leu Leu Arg His Leu Gln His His Arg			
115	120	125	
Phe Gly Asp Leu Val Ser Ser Gln His Ala Ala Tyr Arg			

130

135

140

<210> 46  
<211> 140  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 46

Ile Met Lys Ser Cys His Gln Arg Gln Leu Arg Arg Arg Gly Ala Leu  
1 5 10 15

Pro Gln Glu Ser Leu Lys Asp Ala Gly Gln Cys Glu Val Asp Ser Leu .  
20 25 30

Ala Gly Trp Lys Pro Ser Val Tyr Tyr Val Met Leu Ile Leu Cys Thr  
35 40 45

Ala Ser Ile Leu Ile Ser Cys Cys Ala Ser Ala Met Tyr Thr Pro Ile  
50 55 60

Glu Gly Trp Ser Tyr Phe Asp Ser Leu Tyr Phe Cys Phe Val Ala Phe  
65 70 75 80

Ser Thr Ile Gly Phe Gly Asp Leu Val Ser Ser Gln Asn Ala His Tyr  
85 90 95

Glu Ser Gln Gly Leu Tyr Arg Phe Ala Asn Phe Val Phe Ile Leu Met  
100 105 110

Gly Val Cys Cys Ile Tyr Ser Leu Phe Asn Val Ile Ser Ile Leu Ile  
115 120 125

Lys Gln Ser Leu Asn Trp Ile Leu Arg Lys Met Asp  
130 135 140

= <210> 47  
= <211> 75  
= <212> PRT  
= <213> Homo sapiens

&lt;400&gt; 47

Gly Tyr Gly Asn Ile Ala Pro Ser Thr Glu Gly Gly Lys Ile Phe Cys  
1 5 10 15

Ile Leu Tyr Ala Ile Phe Gly Ile Pro Leu Phe Gly Phe Leu Leu Ala  
20 25 30

Gly Ile Gly Asp Gln Leu Gly Thr Ile Phe Gly Lys Ser Ile Ala Arg  
35 40 45

Val Glu Lys Val Phe Arg Val Ser Thr Val Ser Tyr Leu Asn Ser Asn  
50 55 60

His Cys Asp Pro Ile Gly Phe Ser Leu Thr Gly  
65 70 75

<210> 48  
<211> 54  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 48

00133.US1.ST25.txt

Gly Tyr Gly Asn Val Ala Leu Arg Thr Asp Ala Gly Arg Leu Phe Cys  
1 5 10 15

Ile Phe Tyr Ala Leu Val Gly Ile Pro Leu Phe Gly Ile Leu Leu Ala  
20 25 30

Gly Val Gly Asp Arg Leu Gly Ser Ser Leu Arg His Gly Ile Gly His  
35 40 45

Ile Glu Ala Ile Phe Leu  
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<210> 49  
<211> 118  
<212> PRT  
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<220>  
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<222> (8)..(22)  
<223> Xaa is any amino acid

<400> 49

Asp His Tyr Leu Glu Tyr Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa Xaa His Trp Leu Ala Cys Ile Trp Tyr Ser Ile  
20 25 30

Gly Asp Tyr Glu Val Ile Asp Glu Val Thr Asn Thr Ile Gln Ile Asp  
35 40 45

Ser Trp Leu Tyr Gln Leu Ala Leu Ser Ile Gly Thr Pro Tyr Arg Tyr  
50 55 60

Asn Thr Ser Ala Gly Ile Trp Glu Gly Gly Pro Ser Lys Asp Ser Leu  
65 70 75 80

Tyr Val Ser Ser Leu Tyr Phe Thr Met Thr Ser Leu Thr Thr Ile Gly  
85 90 95

Phe Gly Asn Ile Ala Pro Thr Thr Asp Val Glu Lys Met Phe Ser Val  
100 105 110

Ala Met Met Met Val Gly  
115

<210> 50  
<211> 68  
<212> PRT  
<213> Homo sapiens

<400> 50

Gly Tyr Gly His Ala Ala Pro Gly Thr Asp Ala Gly Lys Ala Phe Cys  
1 5 10 15

Met Phe Tyr Ala Val Leu Gly Ile Pro Leu Thr Leu Val Met Phe Gln  
20 25 30

Ser Leu Gly Glu Arg Met Asn Thr Phe Val Arg Tyr Leu Leu Lys Arg  
35 40 45

00133.US1.ST25.txt

Ile Lys Lys Cys Cys Gly Met Arg Asn Thr Asp Val Ser Met Glu Asn  
50 55 60

Met Val Thr Val  
65

<210> 51  
<211> 55  
<212> PRT  
<213> Homo sapiens

<400> 51

Gly Tyr Gly Tyr Ile Tyr Pro Val Thr Arg Leu Gly Lys Tyr Leu Cys  
1 5 10 15

Met Leu Tyr Ala Leu Phe Gly Ile Pro Leu Met Phe Leu Val Leu Thr  
20 25 30

Asp Thr Gly Asp Ile Leu Ala Thr Ile Leu Ser Thr Ser Tyr Asn Arg  
35 40 45

Phe Arg Lys Phe Pro Phe Phe  
50 55

<210> 52  
<211> 46  
<212> PRT  
<213> Homo sapiens

<400> 52

Lys Lys Gln Val Ser Gln Thr Lys Ile Arg Val Ile Ser Thr Ile Leu  
1 5 10 15

Phe Ile Leu Ala Gly Cys Ile Val Phe Val Thr Ile Pro Ala Val Ile  
20 25 30

Phe Lys Tyr Ile Glu Gly Trp Thr Ala Leu Glu Ser Ile Tyr  
35 40 45

<210> 53  
<211> 35  
<212> PRT  
<213> Homo sapiens

<400> 53

Gly Tyr Gly Asn Leu Ala Pro Ser Thr Glu Ala Gly Gln Val Phe Cys  
1 5 10 15

Val Phe Tyr Ala Leu Leu Gly Ile Pro Leu Asn Val Ile Phe Leu Asn  
20 25 30

His Leu Gly  
35

<210> 54  
<211> 35  
<212> PRT  
<213> Homo sapiens

<400> 54

Gly Tyr Gly Asn Leu Ala Pro Ser Thr Glu Ala Gly Gln Val Phe Cys

## 00133.US1.ST25.txt

1	5	10	15
Val Phe Tyr Ala Leu Leu Gly Ile Pro Leu Asn Val Ile Phe Leu Asn			
20	25	30	

His Leu Gly  
35

<210> 55  
<211> 74  
<212> PRT  
<213> Homo sapiens

<400> 55

Asn Glu Asp Ile Ile Glu Ile Asn His Leu Ser Phe Phe Gly Tyr Cys			
1	5	10	15

Cys Tyr Gln Glu Val Arg Leu Leu Phe Thr Ile Leu Gly Glu Cys			
20	25	30	

Trp Gly Ser Phe Lys Ser Phe Tyr Phe Val Phe Ser Thr Met Ile Ser			
35	40	45	

Leu Asn Pro Thr Gly Gln Gly Thr Arg Val Gly Phe Cys His Tyr Gln			
50	55	60	

Ser Tyr Leu Phe Leu His Ile Ser Cys Tyr  
65 70

<210> 56  
<211> 66  
<212> PRT  
<213> Homo sapiens

<400> 56

Thr Pro Cys Ser Pro Ile Ser Ser Ile Thr Pro Phe Thr Phe Tyr Leu			
1	5	10	15

Ile Phe Thr Ser Ser Ile Ile Thr Phe His Cys Phe Ser Glu Leu Leu			
20	25	30	

Phe Leu Glu Ala Lys Leu Pro Val Ser Ile Ile His Phe Cys Lys Ala			
35	40	45	

Ser Leu Gly Phe Thr Thr Gly Arg Arg Gly Arg Gln Arg Asn Asp Ile			
50	55	60	

Leu Cys  
65

<210> 57  
<211> 35  
<212> PRT  
<213> Homo sapiens

<400> 57

Asn Asn Asp Ile Glu Thr Lys Leu Gly Asn Ser Phe Leu Arg Ala Phe			
1	5	10	15

Ser Glu Gln Arg Leu Arg Phe Ser Gly Met Lys Asn Asn Met Gly Val			
20	25	30	

00133.US1.ST25.txt

Glu Gly Cys  
35

<210> 58  
<211> 45  
<212> PRT  
<213> Homo sapiens

<400> 58

Lys Glu Ala Ser Ala Leu Gly Val Gln Asn Ile Gly Gly Ile Phe Ile  
1 5 10 15

Val Leu Ala Ala Gly Leu Val Leu Ser Val Phe Val Ala Val Gly Glu  
20 25 30

Phe Leu Tyr Lys Ser Lys Lys Asn Ala Gln Leu Glu Lys  
35 40 45

<210> 59  
<211> 40  
<212> PRT  
<213> Homo sapiens

<400> 59

Tyr Leu Leu Gly Leu Pro Val Glu Lys Ile Phe Arg Asp Lys Leu Gly  
1 5 10 15

Leu Leu Thr Ser Leu Arg Gln Ala Pro Val Arg Tyr Leu Leu Lys Pro  
20 25 30

Asp Trp Trp Tyr Ala Gly Lys Cys  
35 40

<210> 60  
<211> 57  
<212> PRT  
<213> Homo sapiens

<400> 60

Pro Val Phe Ile Arg Arg Tyr Phe Leu Phe Tyr His Trp Pro Gln Ile  
1 5 10 15

Val Asn Leu His Met Gln Lys Pro Arg Lys Glu Arg Phe Lys Ser Ala  
20 25 30

Leu Ser Lys Glu Arg Phe Lys Ser Val Ser Ile His Thr Thr Gln Ser  
35 40 45

Ser Tyr Lys Cys Phe Gly Leu Ala Val  
50 55

<210> 61  
<211> 57  
<212> PRT  
<213> Homo sapiens

<400> 61

Asn Leu Phe Gln Val Lys Met Asn Trp Asn Met Ile Arg Thr Ser Ser  
1 5 10 15

Trp Cys Ser Asp Leu Lys Lys Cys Met Tyr Gln Cys Tyr Gln Val Cys

20

25

30

Ile Thr Ser Arg Tyr Tyr Ile Met Phe Leu Gly Trp Phe Phe Ile Ile  
 35                          40                          45

Thr Ala Thr Ala Pro Cys Trp Leu Ile  
 50                          55

<210> 62  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

<400> 62

Val Trp Arg Phe Ser Leu Phe Arg Phe Ile Phe Asn Glu Glu Ile Leu  
 1                          5                          10                          15

Thr Ser Ala Val Leu Leu Ile His Ser Lys Leu Pro Thr Arg His Met  
 20                          25                          30

Val Pro Lys Val Val Cys Leu Lys Phe Leu His Pro Leu Pro Arg Leu  
 35                          40                          45

Ala Tyr Leu Ser Arg Tyr Ser Ser  
 50                          55

<210> 63  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 63

Leu Asn Val Asn Val Gly Gly His Ser Tyr Gln Leu Asp Tyr Cys Glu  
 1                          5                          10                          15

Leu Ala Gly Phe Pro Lys Thr Arg Leu Gly Arg Leu Ala Thr Ser Thr  
 20                          25                          30

Ser Arg Ser Arg Gln Leu Ser Leu Cys Asp Asp Tyr Glu Glu Gln Thr  
 35                          40                          45

Asp Glu Tyr Phe Phe Asp Arg Asp Pro Ala Val Phe Gln Leu Val Tyr  
 50                          55                          60

Asn Phe Tyr Leu Ser Gly Val Leu Leu Val Leu Asp Gly Leu Cys Pro  
 65                          70                          75                          80

Arg Arg Phe Leu Glu Leu Gly Tyr Trp Gly Val Arg Leu Lys Tyr  
 85                          90                          95

Thr Pro Arg Cys Cys Arg Ile Cys Phe Glu Glu Arg Arg Asp Glu Leu  
 100                        105                        110

Ser Glu Arg  
 115

<210> 64  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 64

00133.US1.ST25.txt

Arg His Ser Val Leu Ser Asn Val Ala Thr Glu Lys Met Val Met Leu  
1 5 10 15

Leu Val Phe Ile Cys Val Ala Met Ala Ile Phe Ser Ala Leu Ser Gln  
20 25 30

Leu Leu Glu His Gly Leu Asp Leu Glu Thr Ser Asn Lys Asp Phe Thr  
35 40 45

Ser Ile Pro Ala Ala Cys Trp Trp Val Ile Ile Ser Met Thr Thr Val .  
50 55 60

Gly Tyr Gly Asp Met Tyr Pro Ile Thr Val Pro Gly Arg Ile Leu Gly  
65 70 75 80

Gly Val Cys Val Val Ser Gly Ile Val Leu Leu Ala Leu Pro Ile Thr  
85 90 95

Phe Ile Tyr His Ser Phe Val Gln Cys Tyr His Glu Leu Lys Phe Arg  
100 105 110

Ser Ala Arg  
115

<210> 65

<211> 200

<212> PRT

<213> Homo sapiens

<400> 65

Thr Thr Met Val Pro Thr Ala Leu Gly Val Ser Ser Cys Pro Ala Pro  
1 5 10 15

Trp Glu Thr Pro Ser Ile Lys Gly Leu Tyr Tyr Arg Arg Val Arg Lys  
20 25 30

Val Gly Ala Leu Asp Ala Ser Pro Val Asp Leu Lys Lys Glu Ile Leu .  
35 40 45

Ile Asn Val Gly Gly Arg Arg Tyr Leu Leu Pro Trp Ser Thr Leu Asp  
50 55 60

Arg Phe Pro Leu Ser Arg Leu Ser Lys Leu Arg Leu Cys Arg Ser Tyr  
65 70 75 80

Glu Glu Ile Val Gln Leu Cys Asp Asp Tyr Asp Glu Asp Ser Gln Glu  
85 90 95

Phe Phe Phe Asp Arg Ser Pro Ser Ala Phe Gly Val Ile Val Ser Phe  
100 105 110

Leu Ala Ala Gly Lys Leu Val Leu Leu Gln Glu Met Cys Ala Leu Ser  
115 120 125

Phe Gln Glu Glu Leu Ala Tyr Trp Gly Ile Glu Glu Ala His Leu Glu  
130 135 140

Arg Cys Cys Leu Arg Lys Leu Leu Arg Lys Leu Glu Glu Leu Glu Glu  
145 150 155 160

Leu Ala Lys Leu His Arg Glu Asp Val Leu Arg Gln Gln Arg Glu Thr  
165 170 175

Arg Arg Pro Ala Ser His Ser Ser Arg Trp Gly Leu Cys Met Asn Arg

180

185

190

Leu Arg Glu Met Val Glu Asn Pro  
 195                   200

<210> 66  
<211> 43  
<212> PRT  
<213> Homo sapiens

<400> 66

Leu Gln His Ala Leu Asp Ala Asp Asn Ala Gly Val Ser Pro Ile Arg  
 1                   5                   10                   15

Asn Ser Ser Asn Asn Ser Ser His Trp Asp Leu Gly Ser Ala Phe Phe  
 20                   25                   30

Phe Ala Gly Thr Val Leu Thr Thr Met Arg Tyr  
 35                   40

<210> 67  
<211> 41  
<212> PRT  
<213> Homo sapiens

 <400> 67

  Gly Phe Tyr Thr His Phe Phe Leu Leu Phe Ser Val Leu Asp His Thr  
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  Trp Lys Gly Leu Glu Ser Tyr Tyr Leu Cys Phe Tyr Thr Lys Lys Lys  
 20                   25                   30

  Leu Ser Lys Leu Lys Leu Asn Asp Phe  
 35                   40

  <210> 68  
<211> 27  
<212> PRT  
<213> Homo sapiens

 <400> 68

  Glu Gly Trp Ser Tyr Thr Glu Gly Phe Tyr Phe Ala Phe Ile Thr Leu  
 1                   5                   10                   15

Ser Thr Val Gly Phe Gly Asp Tyr Val Ile Gly  
 20                   25

<210> 69  
<211> 35  
<212> PRT  
<213> Homo sapiens

<400> 69

Gly Tyr Gly Asn Leu Ala Pro Ser Thr Glu Ala Gly Gln Val Phe Cys  
 1                   5                   10                   15

Val Phe Tyr Ala Leu Leu Gly Ile Pro Leu Asn Val Ile Phe Leu Asn  
 20                   25                   30

His Leu Gly  
 35

<210> 70  
<211> 140  
<212> PRT  
<213> Homo sapiens

<400> 70

Ile Met Lys Ser Cys His Gln Arg Gln Leu Arg Arg Arg Gly Ala Leu  
1 5 10 15

Pro Gln Glu Ser Leu Lys Asp Ala Gly Gln Cys Glu Val Asp Ser Leu  
20 25 30

Ala Gly Trp Lys Pro Ser Val Tyr Tyr Val Met Leu Ile Leu Cys Thr  
35 40 45

Ala Ser Ile Leu Ile Ser Cys Cys Ala Ser Ala Met Tyr Thr Pro Ile  
50 55 60

Glu Gly Trp Ser Tyr Phe Asp Ser Leu Tyr Phe Cys Phe Val Ala Phe  
65 70 75 80

Ser Thr Ile Gly Phe Gly Asp Leu Val Ser Ser Gln Asn Ala His Tyr  
85 90 95

Glu Ser Gln Gly Leu Tyr Arg Phe Ala Asn Phe Val Phe Ile Leu Met  
100 105 110

Gly Val Cys Cys Ile Tyr Ser Leu Phe Asn Val Ile Ser Ile Leu Ile  
115 120 125

Lys Gln Ser Leu Asn Trp Ile Leu Arg Lys Met Asp  
130 135 140

<210> 71  
<211> 36  
<212> PRT  
<213> Homo sapiens

<400> 71

Ser Leu Leu Thr Ser Phe Tyr Phe Cys Ile Val Thr Phe Ser Thr Val  
1 5 10 15

Gly Tyr Gly Asp Val Thr Pro Lys Ile Trp Pro Ser Gln Leu Leu Val  
20 25 30

Val Ile Met Ile  
35

<210> 72  
<211> 18  
<212> PRT  
<213> Homo sapiens

<400> 72

Trp Lys Phe Pro Gly Ser Phe Tyr Phe Ala Ile Thr Val Ile Thr Thr  
1 5 10 15

Ile Gly

<210> 73

<211> 543  
<212> PRT  
<213> Homo sapiens

<400> 73

Met Lys Phe Pro Ile Glu Thr Pro Arg Lys Gln Val Asn Trp Asp Pro  
1 5 10 15

Lys Val Ala Val Pro Ala Ala Ala Pro Val Cys Gln Pro Lys Ser Ala  
20 25 30

Thr Asn Gly Gln Pro Pro Ala Pro Ala Pro Thr Pro Thr Pro Arg Leu  
35 40 45

Ser Ile Ser Ser Arg Ala Thr Val Val Ala Arg Met Glu Gly Thr Ser  
50 55 60

Gln Gly Gly Leu Gln Thr Val Met Lys Trp Lys Thr Val Val Ala Ile  
65 70 75 80

Phe Val Val Val Val Tyr Leu Val Thr Gly Gly Leu Val Phe Arg  
85 90 95

Ala Leu Glu Gln Pro Phe Glu Ser Ser Gln Lys Asn Thr Ile Ala Leu  
100 105 110

Glu Lys Ala Glu Phe Leu Arg Asp His Val Cys Val Ser Pro Gln Glu  
115 120 125

Leu Glu Thr Leu Ile Gln His Ala Leu Asp Ala Asp Asn Ala Gly Val  
130 135 140

Ser Pro Ile Gly Asn Ser Ser Asn Asn Ser Ser His Trp Asp Leu Gly  
145 150 155 160

Ser Ala Phe Phe Phe Ala Gly Thr Val Ile Thr Thr Ile Gly Tyr Gly  
165 170 175

Asn Ile Ala Pro Ser Thr Glu Gly Lys Ile Phe Cys Ile Leu Tyr  
180 185 190

Ala Ile Phe Gly Ile Pro Leu Phe Gly Phe Leu Leu Ala Gly Ile Gly  
195 200 205

Asp Gln Leu Gly Thr Ile Phe Gly Lys Ser Ile Ala Arg Val Glu Lys  
210 215 220

Val Phe Arg Lys Lys Gln Val Ser Gln Thr Lys Ile Arg Val Ile Ser  
225 230 235 240

Thr Ile Leu Phe Ile Leu Ala Gly Cys Ile Val Phe Val Thr Ile Pro  
245 250 255

Ala Val Ile Phe Lys Tyr Ile Glu Gly Trp Thr Ala Leu Glu Ser Ile  
260 265 270

Tyr Phe Val Val Val Thr Leu Thr Val Gly Phe Gly Asp Phe Val  
275 280 285

Ala Gly Gly Asn Ala Gly Ile Asn Tyr Arg Glu Trp Tyr Lys Pro Leu  
290 295 300

Val Trp Phe Trp Ile Leu Val Gly Leu Ala Tyr Phe Ala Ala Val Leu  
305 310 315 320

00133.US1.ST25.txt

Ser Met Ile Gly Asp Trp Leu Arg Val Leu Ser Lys Lys Thr Lys Glu  
325 330 335

Glu Val Gly Glu Ile Lys Ala His Ala Ala Glu Trp Lys Ala Asn Val  
340 345 350

Thr Ala Glu Phe Arg Glu Thr Arg Arg Arg Leu Ser Val Glu Ile His  
355 360 365

Asp Lys Leu Gln Arg Ala Ala Thr Ile Arg Ser Met Glu Arg Arg Arg  
370 375 380

Leu Gly Leu Asp Gln Arg Ala His Ser Leu Asp Met Leu Ser Pro Glu  
385 390 395 400

Lys Arg Ser Val Phe Ala Ala Leu Asp Thr Gly Arg Phe Lys Ala Ser  
405 410 415

Ser Gln Glu Ser Ile Asn Asn Arg Pro Asn Asn Leu Arg Leu Lys Gly  
420 425 430

Pro Glu Gln Leu Asn Lys His Gly Gln Gly Ala Ser Glu Asp Asn Ile  
435 440 445

Ile Asn Lys Phe Gly Ser Thr Ser Arg Leu Thr Lys Arg Lys Asn Lys  
450 455 460

Asp Leu Lys Lys Thr Leu Pro Glu Asp Val Gln Lys Ile Tyr Lys Thr  
465 470 475 480

Phe Arg Asn Tyr Ser Leu Asp Glu Glu Lys Lys Glu Glu Glu Thr Glu  
485 490 495

Lys Met Cys Asn Ser Asp Asn Ser Ser Thr Ala Met Leu Thr Asp Cys  
500 505 510

Ile Gln Gln His Ala Glu Leu Glu Asn Gly Met Ile Pro Thr Asp Thr  
515 520 525

Lys Asp Arg Glu Pro Glu Asn Asn Ser Leu Leu Glu Asp Arg Asn  
530 535 540

<210> 74  
<211> 534  
<212> PRT  
<213> Homo sapiens

<400> 74

Ala Ala Ser Thr Glu Thr Pro Pro Thr Pro Gly Ala Val Gly Leu Gly  
1 5 10 15

Ala Ala Pro Gly Gly Pro Ala Met Ala Gly Arg Gly Phe Ser Trp Gly  
20 25 30

Pro Gly His Leu Asn Glu Asp Asn Ala Arg Phe Leu Leu Leu Ala Ala  
.35 40 45

Leu Ile Val Leu Tyr Leu Leu Gly Gly Ala Ala Val Phe Ser Ala Leu  
50 55 60

Glu Leu Ala His Glu Arg Gln Ala Lys Gln Arg Trp Glu Glu Arg Leu  
65 70 75 80

## 00133.US1.ST25.txt

Ala Asn Phe Ser Arg Gly His Asn Leu Ser Arg Asp Glu Leu Arg Gly  
 85 90 95

Phe Leu Arg His Tyr Glu Glu Ala Thr Arg Ala Gly Ile Arg Val Asp  
 100 105 110

Asn Val Arg Pro Arg Trp Asp Phe Thr Gly Ala Phe Tyr Phe Val Gly  
 115 120 125

Thr Val Val Ser Thr Ile Gly Phe Gly Met Thr Thr Pro Ala Thr Val  
 130 135 140

Gly Gly Lys Ile Phe Leu Ile Phe Tyr Gly Leu Val Gly Cys Ser Ser  
 145 150 155 160

Thr Ile Leu Phe Phe Asn Leu Phe Leu Glu Arg Leu Ile Thr Ile Ile  
 165 170 175

Ala Tyr Ile Met Lys Ser Cys His Gln Arg Gln Leu Arg Arg Arg Gly  
 180 185 190

Ala Leu Pro Gln Glu Ser Leu Lys Asp Ala Gly Gln Cys Glu Val Asp  
 195 200 205

Ser Leu Ala Gly Trp Lys Pro Ser Val Tyr Tyr Val Met Leu Ile Leu  
 210 215 220

Cys Thr Ala Ser Ile Leu Ile Ser Cys Cys Ala Ser Ala Met Tyr Thr  
 225 230 235 240

Pro Ile Glu Gly Trp Ser Tyr Phe Asp Ser Leu Tyr Phe Cys Phe Val  
 245 250 255

Ala Phe Ser Thr Ile Gly Phe Gly Asp Leu Val Ser Ser Gln Asn Ala  
 260 265 270

His Tyr Glu Ser Gln Gly Leu Tyr Arg Phe Ala Asn Phe Val Phe Ile  
 275 280 285

Leu Met Gly Val Cys Cys Ile Tyr Ser Leu Phe Asn Val Ile Ser Ile  
 290 295 300

Leu Ile Lys Gln Ser Leu Asn Trp Ile Leu Arg Lys Met Asp Ser Gly  
 305 310 315 320

Cys Cys Pro Gln Cys Gln Arg Gly Leu Leu Arg Ser Arg Arg Asn Val  
 325 330 335

Val Met Pro Gly Ser Val Arg Asn Arg Cys Asn Ile Ser Ile Glu Thr  
 340 345 350

Asp Gly Val Ala Glu Ser Asp Thr Asp Gly Arg Arg Leu Ser Gly Glu  
 355 360 365

Met Ile Ser Met Lys Asp Leu Leu Ala Ala Asn Lys Ala Ser Leu Ala  
 370 375 380

Ile Leu Gln Lys Gln Leu Ser Glu Met Ala Asn Gly Cys Pro His Gln  
 385 390 395 400

Thr Ser Thr Leu Ala Arg Asp Asn Glu Phe Ser Gly Gly Val Gly Ala  
 405 410 415

Phe Ala Ile Met Asn Asn Arg Leu Ala Glu Thr Ser Gly Asp Arg Lys  
 420 425 430

00133.US1.ST25.txt

Pro Gly Met Asp Ala Gly Gln Arg Pro Glu Asn Gly Gly Leu Pro Pro  
435 440 445  
Arg Gly Arg Ala Gln Pro Cys Ala Leu Ala Leu Phe Leu Leu Gly Ala .  
450 455 460  
Val Pro Gly Ser Leu Arg Lys His Leu Lys Ser Asp Leu Gly Ser Asn  
465 470 475 480  
Gln Gln Pro Pro Ser Arg Asp Gly Gly Pro Glu Ala Ser Met Leu Val  
485 490 495  
Ser Ser Leu Phe Phe Lys Ser Lys Phe Ser Leu Phe Lys Thr Asn His  
500 505 510  
Lys Ser Ser Ile Arg His Cys Leu Val Ser Leu Ile Leu Phe Gln Ser  
515 520 525  
Phe Ser Cys Leu Arg Arg  
530

<210> 75  
<211> 384  
<212> PRT  
<213> Homo sapiens

<400> 75

Met Glu Val Ser Gly His Pro Gln Ala Arg Arg Cys Cys Pro Glu Ala  
1 5 10 15  
Leu Gly Lys Leu Phe Pro Gly Leu Cys Phe Leu Cys Phe Leu Val Thr .  
20 25 30  
Tyr Ala Leu Val Gly Ala Val Val Phe Ser Ala Ile Glu Asp Gly Gln  
35 40 45  
Val Leu Val Ala Ala Asp Asp Gly Glu Phe Glu Lys Phe Leu Glu Glu  
50 55 60  
Leu Cys Arg Ile Leu Asn Cys Ser Glu Thr Val Val Glu Asp Arg Lys  
65 70 75 80  
Gln Asp Leu Gln Gly His Leu Gln Lys Val Lys Pro Gln Trp Phe Asn  
85 90 95  
Arg Thr Thr His Trp Ser Phe Leu Ser Ser Leu Phe Phe Cys Cys Thr  
100 105 110  
Val Phe Ser Thr Val Gly Tyr Gly Tyr Ile Tyr Pro Val Thr Arg Leu  
115 120 125  
Gly Lys Tyr Leu Cys Met Leu Tyr Ala Leu Phe Gly Ile Pro Leu Met  
130 135 140  
Phe Leu Val Leu Thr Asp Thr Gly Asp Ile Leu Ala Thr Ile Leu Ser  
145 150 155 160  
Thr Ser Tyr Asn Arg Phe Arg Lys Phe Pro Phe Phe Thr Arg Pro Leu  
165 170 175  
Leu Ser Lys Trp Cys Pro Lys Ser Leu Phe Lys Lys Pro Asp Pro  
180 185 190

## 00133.US1.ST25.txt

Lys Pro Ala Asp Glu Ala Val Pro Gln Ile Ile Ser Ala Glu Glu  
 195 200 205

Leu Pro Gly Pro Lys Leu Gly Thr Cys Pro Ser Arg Pro Ser Cys Ser  
 210 215 220

Met Glu Leu Phe Glu Arg Ser His Ala Leu Glu Lys Gln Asn Thr Leu  
 225 230 235 240

Gln Leu Pro Pro Gln Ala Met Glu Arg Ser Asn Ser Cys Pro Glu Leu  
 245 250 255

Val Leu Gly Arg Leu Ser Tyr Ser Ile Ile Ser Asn Leu Asp Glu Val  
 260 265 270

Gly Gln Gln Val Glu Arg Leu Asp Ile Pro Leu Pro Ile Ile Ala Leu  
 275 280 285

Ile Val Phe Ala Tyr Ile Ser Cys Ala Ala Ala Ile Leu Pro Phe Trp  
 290 295 300

Glu Thr Gln Leu Asp Phe Glu Asn Ala Phe Tyr Phe Cys Phe Val Thr  
 305 310 315 320 .

Leu Thr Thr Ile Gly Phe Gly Asp Thr Val Leu Glu His Pro Asn Phe  
 325 330 335

Phe Leu Phe Phe Ser Ile Tyr Ile Ile Val Gly Met Glu Ile Val Phe  
 340 345 350

Ile Ala Phe Lys Leu Val Gln Asn Arg Leu Ile Asp Ile Tyr Lys Asn  
 355 360 365

Val Met Leu Phe Phe Ala Lys Gly Lys Phe Tyr His Leu Val Lys Lys  
 370 375 380

<210> 76  
<211> 300  
<212> PRT  
<213> Homo sapiens  
<400> 76

Met Glu Val Ser Gly His Pro Gln Ala Arg Arg Cys Cys Pro Glu Ala  
 1 5 10 15

Leu Gly Lys Leu Phe Pro Gly Leu Cys Phe Leu Cys Phe Leu Val Thr  
 20 25 30

Tyr Ala Leu Val Gly Ala Val Val Phe Ser Ala Ile Glu Asp Gly Gln  
 35 40 45

Val Leu Val Ala Ala Asp Asp Gly Glu Phe Glu Lys Phe Leu Glu Glu  
 50 55 60

Leu Cys Arg Ile Leu Asn Cys Ser Glu Thr Val Val Glu Asp Arg Lys  
 65 70 75 80

Gln Asp Leu Gln Gly His Leu Gln Lys Val Lys Pro Gln Trp Phe Asn  
 85 90 95

Arg Thr Thr His Trp Ser Phe Leu Ser Ser Leu Phe Phe Cys Cys Thr  
 100 105 110

Val Phe Ser Thr Val Gly Tyr Gly Tyr Ile Tyr Pro Val Thr Arg Leu

## 00133.US1.ST25.txt

115

120

125

Gly Lys Tyr Leu Cys Met Leu Tyr Ala Leu Phe Gly Ile Pro Leu Met  
 130 135 140

Phe Leu Val Leu Thr Asp Thr Gly Asp Ile Leu Ala Thr Ile Leu Ser  
 145 150 155 160

Thr Ser Tyr Asn Arg Ser Asn Ser Cys Pro Glu Leu Val Leu Gly Arg  
 165 170 175

Leu Ser Tyr Ser Ile Ile Ser Asn Leu Asp Glu Val Gly Gln Gln Val  
 180 185 190

Glu Arg Leu Asp Ile Pro Leu Pro Ile Ala Leu Ile Val Phe Ala  
 195 200 205

Tyr Ile Ser Cys Ala Ala Ile Leu Pro Phe Trp Glu Thr Gln Leu  
 210 215 220

Asp Phe Glu Asn Ala Phe Tyr Phe Cys Phe Val Thr Leu Thr Thr Ile  
 225 230 235 240

Gly Phe Gly Asp Thr Val Leu Glu His Pro Asn Phe Phe Leu Phe Phe  
 245 250 255

Ser Ile Tyr Ile Ile Val Gly Met Glu Ile Val Phe Ile Ala Phe Lys  
 260 265 270

Leu Val Gln Asn Arg Leu Ile Asp Ile Tyr Lys Asn Val Met Leu Phe  
 275 280 285

Phe Ala Lys Gly Lys Phe Tyr His Leu Val Lys Lys  
 290 295 300

<210> 77

<211> 315

<212> PRT

<213> Homo sapiens

<400> 77

Met Glu Val Ser Gly His Pro Gln Ala Arg Arg Cys Cys Pro Glu Ala  
 1 5 10 15

Leu Gly Lys Leu Phe Pro Gly Leu Cys Phe Leu Cys Phe Leu Val Thr  
 20 25 30

Tyr Ala Leu Val Gly Ala Val Val Phe Ser Ala Ile Glu Asp Gly Gln  
 35 40 45

Val Leu Val Ala Ala Asp Asp Gly Glu Phe Glu Lys Phe Leu Glu Glu  
 50 55 60

Leu Cys Arg Ile Leu Asn Cys Ser Glu Thr Val Val Glu Asp Arg Lys  
 65 70 75 80

Gln Asp Leu Gln Gly His Leu Gln Lys Val Lys Pro Gln Trp Phe Asn  
 85 90 95

Arg Thr Thr His Trp Ser Phe Leu Ser Ser Leu Phe Phe Cys Cys Thr  
 100 105 110

Val Phe Ser Thr Val Gly Tyr Gly Tyr Ile Tyr Pro Val Thr Arg Leu  
 115 120 125

00133.US1.ST25.txt

Gly Lys Tyr Leu Cys Met Leu Tyr Ala Leu Phe Gly Ile Pro Leu Met  
130 135 140

Phe Leu Val Leu Thr Asp Thr Gly Asp Ile Leu Ala Thr Ile Leu Ser  
145 150 155 160

Thr Ser Tyr Asn Arg Phe Arg Lys Phe Pro Phe Phe Thr Arg Pro Leu  
165 170 175

Leu Ser Lys Trp Ser Asn Ser Cys Pro Glu Leu Val Leu Gly Arg Leu  
180 185 190

Ser Tyr Ser Ile Ile Ser Asn Leu Asp Glu Val Gly Gln Gln Val Glu  
195 200 205

Arg Leu Asp Ile Pro Leu Pro Ile Ile Ala Leu Ile Val Phe Ala Tyr  
210 215 220

Ile Ser Cys Ala Ala Ala Ile Leu Pro Phe Trp Glu Thr Gln Leu Asp  
225 230 235 240

Phe Glu Asn Ala Phe Tyr Phe Cys Phe Val Thr Leu Thr Thr Ile Gly  
245 250 255

Phe Gly Asp Thr Val Leu Glu His Pro Asn Phe Phe Leu Phe Phe Ser  
260 265 270

Ile Tyr Ile Ile Val Gly Met Glu Ile Val Phe Ile Ala Phe Lys Leu  
275 280 285

Val Gln Asn Arg Leu Ile Asp Ile Tyr Lys Asn Val Met Leu Phe Phe  
290 295 300

Ala Lys Gly Lys Phe Tyr His Leu Val Lys Lys  
305 310 315

<210> 78  
<211> 286  
<212> PRT  
<213> Homo sapiens

<400> 78

Met Glu Val Ser Gly His Pro Gln Ala Arg Arg Cys Cys Pro Glu Ala  
1 5 10 15

Leu Gly Lys Leu Phe Pro Gly Leu Cys Phe Leu Cys Phe Leu Val Thr  
20 25 30

Tyr Ala Leu Val Gly Ala Val Val Phe Ser Ala Ile Glu Asp Gly Gln  
35 40 45

Val Leu Val Ala Ala Asp Asp Gly Glu Phe Glu Lys Phe Leu Glu Glu  
50 55 60

Leu Cys Arg Ile Leu Asn Cys Ser Glu Thr Val Val Glu Asp Arg Lys  
65 70 75 80

Gln Asp Leu Gln Gly His Leu Gln Lys Val Lys Pro Gln Trp Phe Asn  
85 90 95

Arg Thr Thr His Trp Ser Phe Leu Ser Ser Leu Phe Phe Cys Cys Thr  
100 105 110

## 00133.US1.ST25.txt

Val Phe Ser Thr Val Gly Tyr Gly Tyr Ile Tyr Pro Val Thr Arg Leu  
 115 120 125

Gly Lys Tyr Leu Cys Met Leu Tyr Ala Leu Phe Gly Ile Pro Leu Met  
 130 135 140

Phe Leu Val Leu Thr Asp Thr Gly Asp Ile Leu Ala Thr Ile Leu Ser  
 145 150 155 160

Thr Ser Tyr Asn Arg Phe Arg Lys Phe Pro Phe Thr Arg Pro Leu  
 165 170 175

Leu Ser Lys Trp Leu Asp Ile Pro Leu Pro Ile Ile Ala Leu Ile Val  
 180 185 190

Phe Ala Tyr Ile Ser Cys Ala Ala Ile Leu Pro Phe Trp Glu Thr  
 195 200 205

Gln Leu Asp Phe Glu Asn Ala Phe Tyr Phe Cys Phe Val Thr Leu Thr  
 210 215 220

Thr Ile Gly Phe Gly Asp Thr Val Leu Glu His Pro Asn Phe Phe Leu  
 225 230 235 240

Phe Phe Ser Ile Tyr Ile Ile Val Gly Met Glu Ile Val Phe Ile Ala  
 245 250 255

Phe Lys Leu Val Gln Asn Arg Leu Ile Asp Ile Tyr Lys Asn Val Met  
 260 265 270

Leu Phe Phe Ala Lys Gly Lys Phe Tyr His Leu Val Lys Lys  
 275 280 285

<210> 79  
<211> 20  
<212> DNA  
<213> Homo sapiens

<400> 79  
ccctccgtgt actacgtcat

20

<210> 80  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 80  
cctcaggatc cagttcaagg a

21

<210> 81  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 81  
gggaatattg ctccgagcac t

21

<210> 82  
<211> 23  
<212> DNA  
<213> Homo sapiens

## 00133.US1.ST25.txt

<400> 82		
ccactttgc aatgctttc cca	23	
<210> 83		
<211> 20		
<212> DNA		
<213> Homo sapiens		
<400> 83		20
ccctccgtgt actacgtcat		
<210> 84		
<211> 21		
<212> DNA		
<213> Homo sapiens		
<400> 84		21
cctcaggatc cagttcaagg a		
<210> 85		
<211> 22		
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<213> Homo sapiens		
<400> 85		22
gctatggcta catctacccc gt		
<210> 86		
<211> 20		
<212> DNA		
<213> Homo sapiens		
<400> 86		20
tgccaggatg tcgcctgtgt		
<210> 87		
<211> 1576		
<212> DNA		
<213> Homo sapiens		
<400> 87		60
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actcggtcg gctccgaggc tccgaagccg acgcccggcag ctcagccccg gggggggag	120	
caggactgcc cgacacagccc gcacacttagga ggcggccgatc ccgaacgcct catgggacgc	180	
ccccgggggc tctctccacg ctttgctgcc gctgtccgggt cctaggcgcc cgggatccac	240	
ggcccaaaaa cccgttagccg cccggccctg cccggcccccct cctgctgctg ctgctgctgc	300	
cgccgttcgc acctcaacga ggacacccggc cgcttcgtgc tgctggcgcc gtcacatggc	360	
ctctacctgg tggcggtgc cacagtcttc tcggcgctcg agagccccgg cgaggcgag	420	
gcgcgggcgc gctggggcgc cacgctgcgc aacttcagcg ctgcgcacgg cgtggccgag	480	
ccagagctgc gcgccttcct cccggcactac gaggccgcgc tggccgcggg cgtccgcgc	540	
gacgcgctgc gcccgcgtg ggacttcccc ggcgccttct acttcgtggg caccgtggtg	600	

## 00133.US1.ST25.txt

tcaaccatag	gttcggcat	gaccacccc	gcgacggtgg	gcgggaaggc	cttcctcatc	660
gcctacgggc	tgttcggctg	cgctgggacc	atcctgttct	tcaaccttct	cctggagcgc	720
atcatctcgc	tgctggcctt	catcatgcgc	gcctgccggg	agcgccagct	gcgcccagc	780
ggcctgctgc	ccgcccacctt	ccgcccggc	tccgcgtct	cggaggccga	cagcctggcg	840
ggctggaagc	cctcggtgta	ccacgtgctg	ctcatcctgg	gcctgttcgc	cgtgctgctg	900
tcctgctgcg	cctcggccat	gtacaccagc	gtggagggct	gggactacgt	ggactcgctc	960
tacttctgct	tgcgtcacctt	cagcaccatc	ggcttcgggg	acctggtag	cagccagcac	1020
ggccgcctacc	gaaaccaggg	gctctaccgc	ctggcaact	tcctcttcat	cctgctcg	1080
gtgtgctgca	tttactcgct	cttcaacg	atctccatcc	tcatcaagca	ggtgctcaac	1140
tggatgctgc	gcaagctgag	ctgcccgtgc	tgcgcgcgt	gctgcccggc	tcctggcg	1200
ccccctggccc	ggcgcaatgc	catcacc	ggctccggc	tgcgcgcgg	cctggccg	1260
ctcgggtccg	accccgccgc	ccgcgacagc	gacgcccagg	gccgcgcct	ctcgggcg	1320
ctcatctcca	tgcgcgac	cacggcctcc	aacaagg	cgctggcg	gctgcagaag	1380
cagctgtcgg	agacggccaa	cggttacccg	cgacgcgt	gctcaacac	gcccagaac	1440
ggcttctcgg	gccccgtggg	cgcgctggc	atcatgaaca	accggctggc	cgagaccagc	1500
gcctccaggt	agaccgccc	tccgcccgc	ccggggaccc	tctccaggcc	gcggggccgc	1560
cggcggttgt	ttgttt					1576

<210> 88  
 <211> 297  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 88

Met	Thr	Thr	Pro	Ala	Thr	Val	Gly	Gly	Lys	Ala	Phe	Leu	Ile	Ala	Tyr
1				5			10			15					

Gly	Leu	Phe	Gly	Cys	Ala	Gly	Thr	Ile	Leu	Phe	Phe	Asn	Leu	Phe	Leu
		20			25				30						

Glu	Arg	Ile	Ile	Ser	Leu	Leu	Ala	Phe	Ile	Met	Arg	Ala	Cys	Arg	Glu
		35			40				45						

Arg	Gln	Leu	Arg	Arg	Ser	Gly	Leu	Leu	Pro	Ala	Thr	Phe	Arg	Arg	Gly
		50			55			60							

Ser	Ala	Leu	Ser	Glu	Ala	Asp	Ser	Leu	Ala	Gly	Trp	Lys	Pro	Ser	Val
		65			70			75		80					

Tyr	His	Val	Leu	Leu	Ile	Leu	Gly	Leu	Phe	Ala	Val	Leu	Leu	Ser	Cys
			85				90				95				

Cys	Ala	Ser	Ala	Met	Tyr	Thr	Ser	Val	Glu	Gly	Trp	Asp	Tyr	Val	Asp
				100			105			110					

Ser	Leu	Tyr	Phe	Cys	Phe	Val	Thr	Phe	Ser	Thr	Ile	Gly	Phe	Gly	Asp
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

## 00133.US1.ST25.txt

115

120

125

Leu Val Ser Ser Gln His Ala Ala Tyr Arg Asn Gln Gly Leu Tyr Arg  
130 135 140

Leu Gly Asn Phe Leu Phe Ile Leu Leu Gly Val Cys Cys Ile Tyr Ser  
145 150 155 160

Leu Phe Asn Val Ile Ser Ile Leu Ile Lys Gln Val Leu Asn Trp Met  
165 170 175

Leu Arg Lys Leu Ser Cys Arg Cys Cys Ala Arg Cys Cys Pro Ala Pro  
180 185 190

Gly Ala Pro Leu Ala Arg Arg Asn Ala Ile Thr Pro Gly Ser Arg Leu  
195 200 205

Arg Arg Arg Leu Ala Ala Leu Gly Ala Asp Pro Ala Ala Arg Asp Ser  
210 215 220

Asp Ala Glu Gly Arg Arg Leu Ser Gly Glu Leu Ile Ser Met Arg Asp  
225 230 235 240

Leu Thr Ala Ser Asn Lys Val Ser Leu Ala Leu Leu Gln Lys Gln Leu  
245 250 255

Ser Glu Thr Ala Asn Gly Tyr Pro Arg Ser Val Cys Val Asn Thr Arg  
260 265 270

Gln Asn Gly Phe Ser Gly Gly Val Gly Ala Leu Gly Ile Met Asn Asn  
275 280 285

Arg Leu Ala Glu Thr Ser Ala Ser Arg  
290 295